

### Remarks

In the Office Action dated February 9, 2005, the Examiner objected to the disclosure. The Examiner rejected claims 1-60 under 35 U.S.C. § 112, second paragraph. The Examiner rejected claims 1, 5, 9-15, 21, 25, 29-35, 41, 45 and 49-55 under 35 U.S.C. § 103 as being unpatentable over the U.S. Patent to Lange, et al. 6,403,314 in view of the U.S. Patent to Lane, et al. 6,027,884. The Examiner rejected claims 1, 6-8, 16-17, 21, 26-28, 36-37, 41, 46-48 and 56-57 under 35 U.S.C. § 103 as being unpatentable over Lange, et al. in view of Lane, et al. and further in view of the publication RNA Biochemistry and Biotechnology in the name of Barciszewski, et al. The Examiner did not reject claims 2-4, 18-20, 22-24, 38-40 or 42-44 based on the art of record.

By this Amendment, Applicants' Attorney has amended each of the independent claims to more particularly point out and distinctly claim the present invention. In particular, each of the independent claims has been amended to incorporate the limitations of the dependent claim immediately following the independent claim. For example, independent claim 1 has been amended to include the limitations of now cancelled claim 2 and to recite the steps of "statistically weighting the hybridization thermodynamics of more than one individual single stranded and bimolecular complexes" and "outputting at least one equilibrium concentration of at least one species". Clearly, these features in combination with the other features of claim 1 are not shown by the prior art of record, taken either alone or in combination with one another.

Also, the phrase "higher order" has been eliminated from each of the amended independent claims to more particularly point out and distinctly claim what Applicants regard as their invention.

Consequently, in view of the above and in the absence of better art Applicants' Attorney respectfully submits the application is in condition for allowance which allowance is respectfully requested.

Respectfully submitted,

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